ITEM in Educational Systems: Where are we? Where are we going?

Panel Discussion

Chair: A. J. Visscher

Panelists: C. Fulmer, A. Fung, Y. Gev, P. Nolan, I. Selwood, A. Tatnall

The first topic discussed was the strategies for designing computer-assisted school information systems (SISs).

It was suggested that schools should prepare students for the world of tomorrow and therefore software designers should design SISs for the administration and management of the schools of the future. Designs should be directed at problem solving rather than adapting to what already exists and school staff must be involved in design activities. One way of meeting this need is for groups of school administrators to be formed to determine the information needs of schools.

Countries that had worked more in a "top-down" way (experts imposing a system upon schools) had experienced negative results (e.g. resistance from school staff). However, a certain degree of this "top-down" approach may be desirable since school staff do not necessarily know of all the possibilities that it can offer and therefore may adapt to the existing situation too much. The "expert" must point out to schools new and valuable computer assisted activities, as they become possible, so that school functioning can improve. Following this, schools need to determine whether these innovations should be adopted, adapted or rejected. The feedback of users is crucial and one way of ensuring this, that is also a prerequisite for success, is to form user-groups (to receive proposals for software design and adaptations). A hot line for direct contact and conversation between schools and software producers is also a necessity. However, systems must be developed in an incremental manner and therefore user feedback can not always be implemented immediately as this could lead to systems that are hard to maintain (software - spaghetti structures).

A number of other problems were observed in the existing situation, including:

- * Lack of awareness, on the part of users, that information needs must be assessed periodically.
- * A monopoly of one software vendor in a country is undesirable (no drive to optimize the software).
- * Schools have found it difficult to evaluate available systems, and are also in need of training and advice on a variety of matters, including security arrangements.
- * Links between management systems and pedagogical computer applications are needed.
- * The impact of ITEM on the teacher-learning process must be at the center of attention (supporting teachers by means of ITEM should be an important goal).

We should first think about what we would like schools to be and then determine how ITEM can help us in achieving that goal (ITEM as a means and not as an end).

It was also suggested that there was a need for more research and publications concerning ITEM in general, and more specifically, a need for objective evaluations of software packages, but in many cases it is difficult to find the required funding for such activities.

One of the panelists stated that we are still behind in ITEM if we compare educational management uses of IT with other IT uses in society. ITEM has not raised productivity of schools yet and is still feared by many teachers and principals! It was re-stressed that, we should avoid a "we" (ITEM designers and promoters) "them" (principals and teachers) approach and that a dialogue should exist between researchers, developers and users in schools to avoid repeating mistakes.

Another important goal should be realizing communications between schools (even between schools of different countries), external data banks, and external organizations (educational and other) to enhance knowledge about ITEM and data communication.

Hong Kong in line with the above approach is working on developing teacher support systems that link teachers and experts in order to support classroom teachers with information concerning content and methodology of subjects. Israel is also trying to support the work of classroom teachers directly under their ITEM initiative by providing them with software tools for assessing pupils.

The general conclusion that was drawn for the panel discussion was that - "throughout the world there appears to be a lot of similarity in experiences, problems and needs, and therefore better ways of exchanging information across the world are desirable".